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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/555,092

11/02/2005

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EXAMINER

KNABLE, GEOFFREY L

ART UNIT

PAPER NUMBER

1791

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/555,092	Applicant(s) KANENARI, DAISUKE	
	Examiner Geoffrey L. Knable	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/2/05</u> . | 6) <input type="checkbox"/> Other: ____. |

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1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4 and 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaido et al. (US 5,938,869).

Kaido et al. '869 discloses a method of making a tire innerliner in which:

“either one or more types of a thermoplastic resin having an action of preventing air permeation are fabricated into a single or multiple layers of cylindrical thermoplastic film by conventional extrusion, for example, inflation molding.

Next, the extruded single or multiple layers of cylindrical thermoplastic film are fit over the drum for molding the tire at the time of molding the green tire by cutting and supplying the necessary amount on the drum. This cylindrical thermoplastic film may be wound up once on a roll etc. and supplied on the molding drum at the time of molding the green tire.” (col. 8, lines 45-56)

Thus, Kaido et al. discloses winding a cylindrical/tubular film on a roll and later unwinding the tubular film from the roll and cutting to an appropriate width and then feeding to a tire building machine/drum. Further, Kaido et al. indicates that the film can be a thermoplastic elastomer obtained by blending a thermoplastic resin and rubber (e.g. col. 4, lines 28+). Kaido et al. therefore teaches each of the requirements of claim 1 except that it does not suggest winding in rolls corresponding to different nominal rim diameters. It would however have been readily apparent to the ordinary artisan that if a cylindrically formed film liner is used, then it of necessity will only be suitable and effective for use to form a single nominal diameter tire. As such, since the ordinary

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artisan certainly would have desired to build tires of different nominal diameters, it would have been obvious to form plural rolls of different diameter cylindrical/tubular film liners following the Kaido et al. teachings to enable building different nominal diameter tires - only the expected and predictable results would have been achieved. A process as required by claim 1 would therefore have been obvious.

As to claim 2, as already noted, Kaido et al. suggests cylindrical/tubular film extrusion. As to claims 3 and 4, as already noted in the above quoted excerpt, Kaido et al. suggest that the film can be extruded as a multiple layer film. Further, it is indicated that when formed of multiple layers, a surface layer of adhesive can be formed (col. 9, lines 8-13). As to claim 6, storage of intermediate materials is well known, typical and obvious in the tire building art for only the expected and predictable results. As to claim 7, as already noted, formation and supplying cylindrical/tubular films of an appropriate diameter for any given tire building machine/drum would have been obvious. As to claim 8, note e.g. col. 6, lines 14-16. As to claim 9, the component is clearly an inner liner.

3. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaido et al. (US 5,938,869) as applied above, and further in view of at least one of [Hashimura et al. (US 2002/0033557) and Kaido et al. (US 6,136,123)] and optionally further in view of JP 2002-103471 to Bridgestone.

Kaido et al. '869 discloses winding a tubular film in a roll as well as that bonding between the film and adjacent rubber layer may be achieved using an adhesive (col. 6, lines 26-32). It however is not specifically taught to unwind the tubular film and apply

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the adhesive (although specific mention of a multiple layer coextrusion is made as noted above in the discussion of claims 3-4). Hashimura et al. is also directed to thermoplastic elastomers used for the tire inner liner material and teaches that an adhesive may be used to enhance the bonding of the inner liner to adjoining layers (paragraph [0034]), this reference further indicating an understanding in this art that the adhesive can be applied either as a coating in a solvent or by coextrusion (paragraph [0043]). Kaido et al. '123 provide a similar teaching, this also being in the context of a cylindrical film inner liner (e.g. col. 4, line 54 - col. 5, line 11; col. 8, line 58 - col. 9, line 25). In view of these teachings, it would have been obvious to apply the adhesive in Kaido et al. '869 either as a coating or as a coextruded layer for only the expected and predictable results. If applied as a coating, it further would have been readily apparent that it would have to be applied after formation of the cylindrical/tubular film and on the unrolled film. Whether done before rolling up or as an intermediate stage requiring unrolling and rerolling (since coating can only occur on the unrolled material) would have represented obvious alternatives to the ordinary artisan dictated by for example space and tooling concerns - only the expected and predictable results would be achieved. JP '471 has been optionally cited as additional evidence that the ordinary artisan, faced with a desire to coat a cylindrical/tubular film in formation of a tire innerliner, understands that one way to effect this is to unwind the film, coat/dry and rewind the film - note esp. fig. 2 and paragraphs [0113]-[0115] of included machine translation. Such would have further motivated the ordinary artisan to effect the

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adhesive coating in the claim 5 manner with a reasonable and predictable expectation of success.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey L. Knable whose telephone number is 571-272-1220. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Geoffrey L. Knable/
Primary Examiner, Art Unit 1791

G. Knable
March 18, 2008